F-8632

Ser. No. 10/531,815

## AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

- 1.(Original) Method for the disintegration and tribochemical activation in particular of inorganic materials, characterized in that the starting materials are comminuted (disintegrated) to a particle size of less than 1 µm by the effect of impact pressure fronts that occur as compression shocks on profiles are moved transonically, with a pulse duration of 10 µs and a repetition rate of greater than 8 kHz.
- 2.(Original) Method in accordance with claim 1, characterized in that during the disintegration of materials with a crystalline structure a conglomerate of activated mixed crystals is produced that has an increased capacity for crystal formation when water is added.
- 3.(Original) Method in accordance with claim 1, characterized in that the effective duration of said impact pressure fronts (4) lasts until the crystal lattice structure of said particles (30) has been destroyed.

F-8632

Ser. No. 10/531,815

- 4.(Previously Presented) Method in accordance with claim 1, characterized in that said impact pressure fronts occur due to rotating shaped bodies (1) that have aerodynamically formed profiles and that are accelerated to the transonic speed range.
- 5.(Previously Presented) Method in accordance with claim 1,, characterized in that said particles are subjected to impact pressure fronts (4) of shaped bodies (1) that are rotating in opposition to one another.
- 6.(Previously Presented) Method in accordance with claim 1, characterized in that the disintegration takes place under protective gas.

7-10.(Cancelled)

- 11.(Currently Amended) Apparatus in accordance with claim [[7]]12, wherein characterized in that the section of said shaped body (1) has a non-critical profile.
- 12.(New) Apparatus for disintegration and tribochemical activation of in particular inorganic materials with aerodynamically formed shaped bodies on disks that are rotating in opposition to one another, wherein present on the

F-8632

Ser. No. 10/531,815

off-flow surfaces of said shaped bodies is a line as the starting point of an impact pressure front for which the air flowing around said changes from the supersonic range to the subsonic range and an impact pressure front occurs.

13.(New) Apparatus in accordance with claim 12, wherein present on said shaped body are two off-flow surfaces, each with a line, as the starting point of said impact pressure front for which the air flowing around changes from the supersonic range to the subsonic range and impact pressure fronts occur.

14.(New) Apparatus in accordance with claim 13, wherein the rate of repetition of said impact pressure fronts varies and frequency portions of the rate of repetition of > 15 kHz occur in the supersonic range.

15.(New) Apparatus in accordance with claim 14, wherein the section of said shaped bodies has a non-critical profile for a laminar flow.